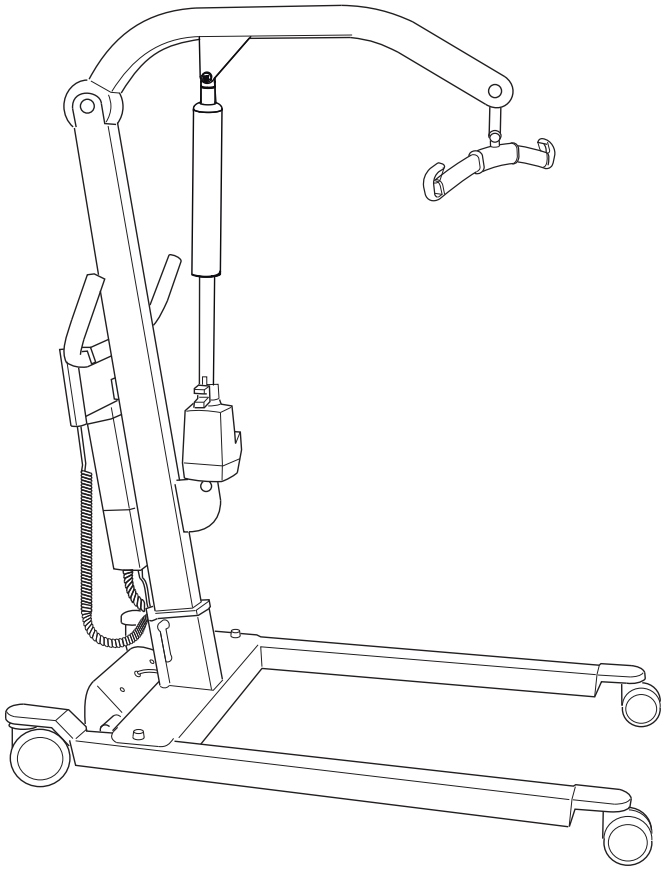
Liko
A Hill-Rom Company

Viking L

Instruction Guide

English
7EN136102-03
2012-05-10

Applies to the following model:
Viking L Prod. No. 2040004



Product Description

Viking L is a mobile lift that has been specially developed for lifting heavy patients.

With a 250 kg (550 lbs.) capacity, Viking is ideal for most normal lifting situations, even for lifting from the floor.

Viking L is a fully electric mobile lift, i.e., both raising and lowering of the lift arm and width adjustment of the base are done with electric motors.

To ensure maximum safety for caregivers and patients, Viking L is equipped for both mechanical and electrical emergency lowering.

For the caregiver, manoeuvring a mobile lift with a heavy patient can be a difficult task.

Avoid using Viking L for transferring very heavy patients; instead, use a wheelchair/hygiene chair for transfers whenever possible. During the actual lifting situation, when the patient is suspended in the sling, it may be easier to move the empty wheelchair to the lift, instead of vice versa.

In each case, assess the situation to determine how many caregivers are needed to perform a safe and ergonomically correct lift and transfer.

Selecting the appropriate slings and accessories for each individual is important to assure maximum function and safety when using a patient lift.

⚠ is a warning triangle used for situations that demand extra care and attention.

In this document, the person being lifted is referred to as the ”patient” and the person helping is referred to as the ”caregiver”.

IMPORTANT!
Carefully read instructions for the lift and lifting accessories before use. Lifting and transferring a person always presents a potential risk. A thorough understanding of the contents of this instruction guide is essential. Only trained personnel should use the equipment. If you have questions, please contact Liko/Hill-Rom.

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⚠ NOTE!
This instruction guide contains information that is important for users of the product. A complete understanding of the contents of this instruction guide is essential, and only personnel who are well informed should use the equipment. Remember to keep the instruction guide readily accessible for users of the product.

Safety Instructions

Before using the lift, make certain that:
- the lift is assembled according to the instructions
- lifting accessories are correctly applied to the lift
- the batteries have been charged for at least 6 hours
- you have read and understood the instruction guides for the lift and lifting accessories
- personnel using the equipment have received appropriate instructions and training
- you have selected the correct type, size, material, and design of slings and accessories to safely meet the patient's needs

Before lifting <u>always</u> make certain that:
- the lifting accessories are not damaged
- the lifting accessory is correctly and securely applied to the patient, so that no personal injury can occur
- the lifting accessory is correctly applied to the lifting equipment
- the sling's strap loops are correctly fastened to the slingbar hooks when the sling strap is extended, but before the patient is lifted from the underlying surface

△ Never leave a patient unattended in a lifting situation!

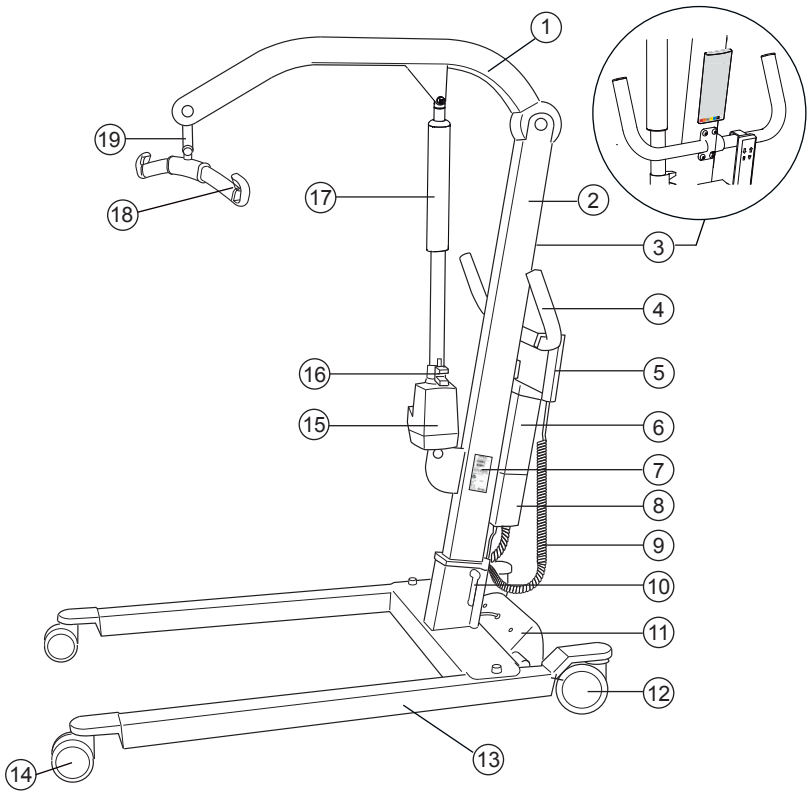
Viking L is tested by an accredited testing institute.
Viking L complies with the requirements according to IEC 60601-1, IEC 60601-1-2, EN ISO 10535, UL-60601-1, and CAN/CSA C22.2 No.601.1.

Particular care must be taken when using strong sources of potential disturbance, such as diathermy, etc., so that cables are not positioned on or near the lift. If you have questions, please consult the responsible assistive-device technician or the supplier.

Equipment is not suitable for use in the presence of flammable mixtures.

Max. load: 250 kg (550 lbs.)

Definitions



1. Lift mast
2. Lift arm
3. Holder for Quick Reference Guide with colour codes for sling sizes
4. Handle
5. Handcontrol
6. Control box with emergency stop, built-in charger and electrical emergency lowering
7. Product decal
8. Battery box
9. Cable for handcontrol
10. Locking handles
11. Motor for base width adjustment
12. Rear wheel with brake
13. Base
14. Front wheel
15. Motor for lift arm
16. Emergency lowering (mechanical)
17. Outer tube
18. Slingbar with latches
19. Flexlink

Technical Data

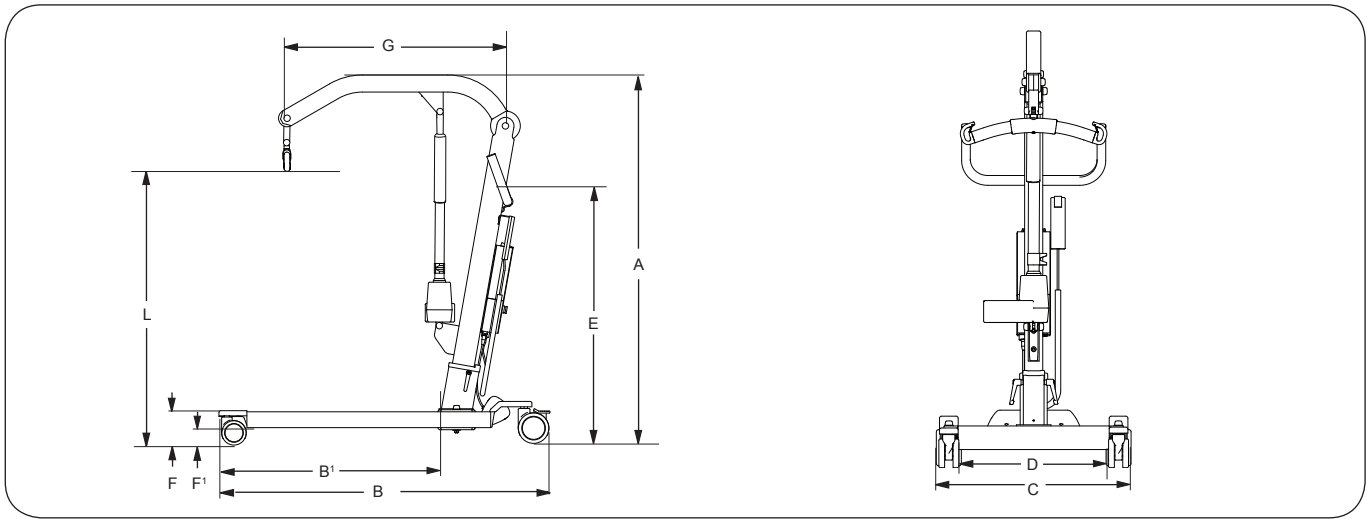
Lifting speed:	3.5 cm/s (0.8 inch./s) without load
Batteries:	Two 12 V, 2.9 Ah, valve-regulated lead-acid gel-type batteries. New batteries are provided by the supplier.
Battery	Built-in charger, 100-240 V AC, max 400 mA
Motor (mast):	24 V, 10.8 A, permanent magnetic motor with mechanical safety mechanism, safety nut and outer tube.
Motor (base):	24 V, 5.5 A, permanent magnetic motor.
Material:	Aluminium
Emergency lowering:	Mechanical and electrical
Wheels:	Standard front: 100 mm dual. Standard rear: 125 mm dual w. brake. Alt. front: 75 mm dual. Alt. rear: 100 mm single w. brake.
Intermittent operation:	Int. Op 10/90, active operation max 2 min. Out of a time of 100, active must be less than 10, though not more than 2 min.
Degree of protection:	IP 43

Built for indoor operation.

Type B according to the degree of protection against electric chock.

Class II equipment.

Measurements



Maximum load and weight in kg. Measures in mm.

Model	Wheel diameter	Max. load	L Max	L Min	A Max	A Min	B	B¹	C	D	E	F	F¹	G	Weight tot	Weight part	Turning diameter
Viking L	100/125 *	250	1790	450	2000	1360	1350	900	660-960	550-950	1060	140	45	900	40	22	1420
Viking L	75/100	250	1780	440	1990	1350	1350	900	660-960	550-950	1050	120	35	900	40	22	1420

* Standard for Viking L.

Maximum load and weight in lbs. Measures in inches.

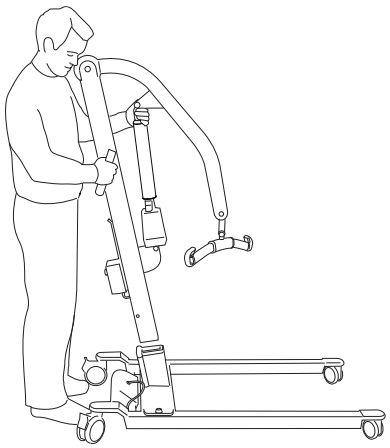
Model	Wheel diameter	Max. load	L Max	L Min	A Max	A Min	B	B¹	C	D	E	F	F¹	G	Weight tot	Weight part	Turning diameter
Viking L	3.9/4.9*	550	70	18	79	54	53	35	26-38	22-37	42	5.5	1.8	35	88	48	60
Viking L	3.0/3.9	550	70	18	79	54	53	35	26-38	22-37	42	4.7	1.4	35	88	48	60

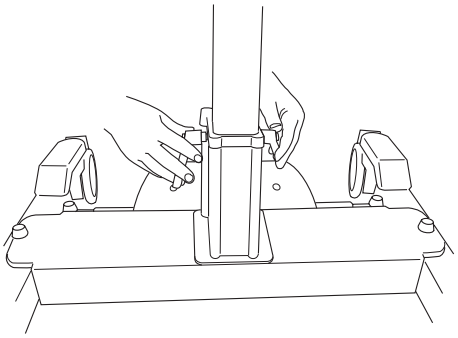
* Standard for Viking L.

Assembly

Before assembly, make sure you have the following parts:

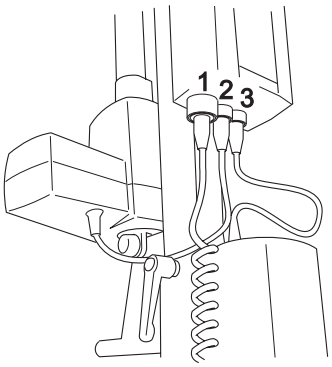
- Mast with lift arm, motor for lift arm, control box and slingbar with latches
- Base with motor for width adjustment
- Handcontrol with cable
- Locking Handles (2 pcs)
- Battery box incl. holder for charger cable
- Bag containing Instruction Guide, Quick Reference Guide, cable for charging and extension cable for charging.

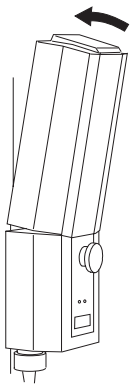




1. Lock both rear wheels. Place the mast in the tube on the base.

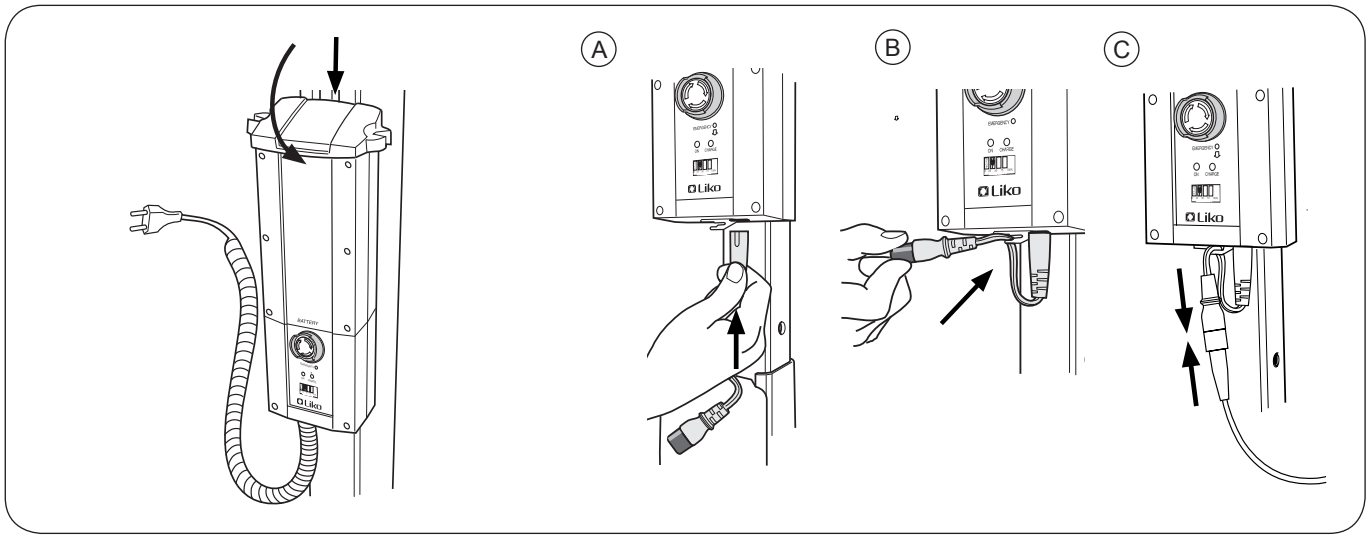
2. Secure the mast with the locking handles.





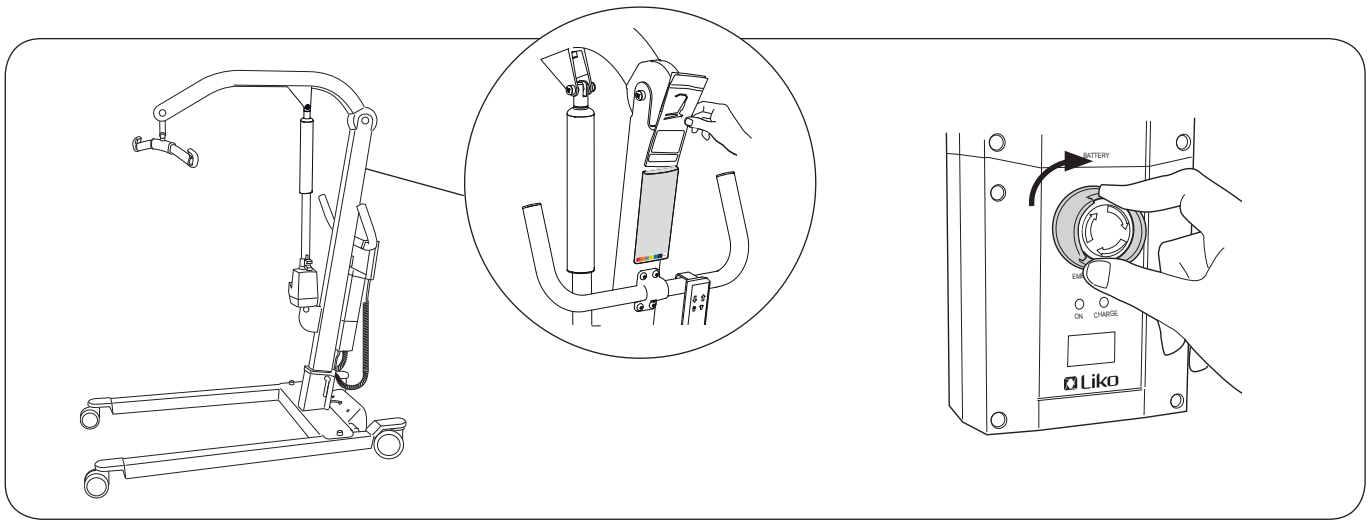
3. Connect the cables as follows:
   - Handcontrol cable to socket number 1
   - Cable for lift arm motor to socket number 2
   - Base motor cable to socket number 3.

4. Place the battery box into position on top of the control box. Check that the battery box is locked to the assembly part (a 'click' will be heard).



5. Mount the holder for the charger cable. Hook it on the outer edge and press down until you hear a 'click'.

6. A) Connect the extension cable for charging to the control box.
   B) Insert the extension cable in the tension clip underneath the control box.
   C) Connect the charger cable to the extension cable.



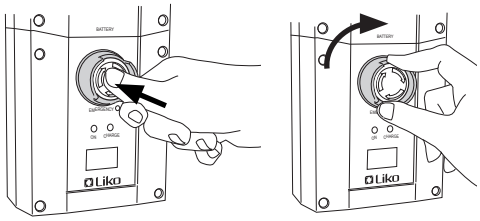
7. Place the Quick Reference Guide in the holder on the mast.

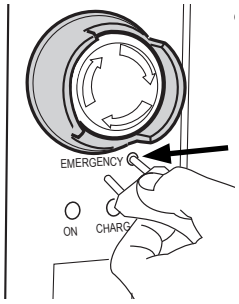
8. Reset the emergency stop by turning the button in the direction indicated by the arrows.

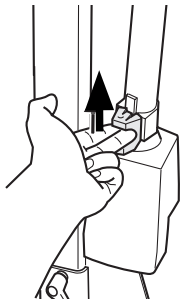
After assembly, check to ensure that:

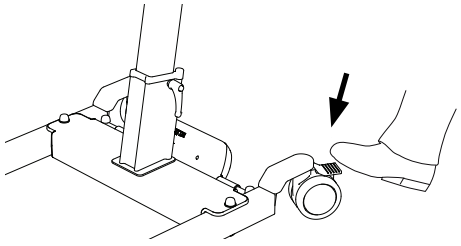
- lift mast motions correspond with the buttons on the handcontrol
- emergency lowering works properly (mechanical and electrical)
- wheel brakes work properly
- the width adjustment of the base works properly
- the indicator lamps on the front of the control box light during charging.

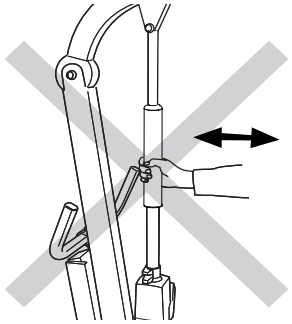
Operation











Operation

Operate the lift using the pushbuttons on the handcontrol.

For raising and lowering, press either of the two upper pushbuttons. Directional arrows show the direction of movement (up/down), when the handcontrol is held as illustrated. The lift stops when you release the buttons.

For base-width adjustment, press either of the two lower pushbuttons:

Wider

Narrower.

Emergency stop

To use the emergency stop:
Push the red emergency stop button on the control box.

To reset:
Turn the button in the direction of the arrows.

Electrical emergency lowering

With a narrow object, press the hole marked "EMERGENCY" on the control box.

△ The object used to press with must not be sharp, since this may cause damage to the control box!

Mechanical emergency lowering

Pull the red emergency lowering regulator straight upward. The mechanical emergency lowering functions only when the lift arm is loaded, i.e., when the patient is in the lift. Lowering starts after a short delay.

Locking the wheels

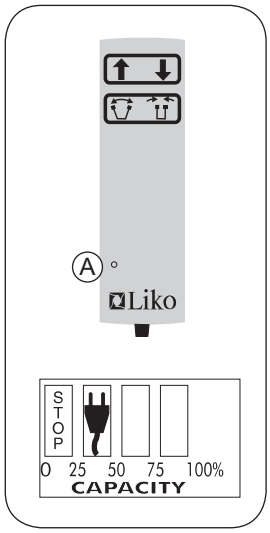
The rear wheels can be locked for rotation and lateral movement. To lock the wheels press the brake lever above the wheel down with your foot. Release the wheels by pressing the top side of the lever.

During lifting, wheels should remain unlocked so that the lift may shift to the patient's center of gravity. The wheels should however be locked if there is a risk for the lift moving into the patient, for example when lifting from the floor.

△ Locked wheels during lifting increases the risk of the lift tilting over.

△ Never move the lift by pulling the actuator!

Charging the batteries



Capacity

If the battery needs charging, a lamp (A) is lit on the hand-control. There is, however, enough power left in the battery for a few more lifts.

A display on the control box shows the current battery capacity. When all fields of the display are black, the battery is fully charged. When a fuse symbol appears (see illustration), the battery must be re-charged immediately.

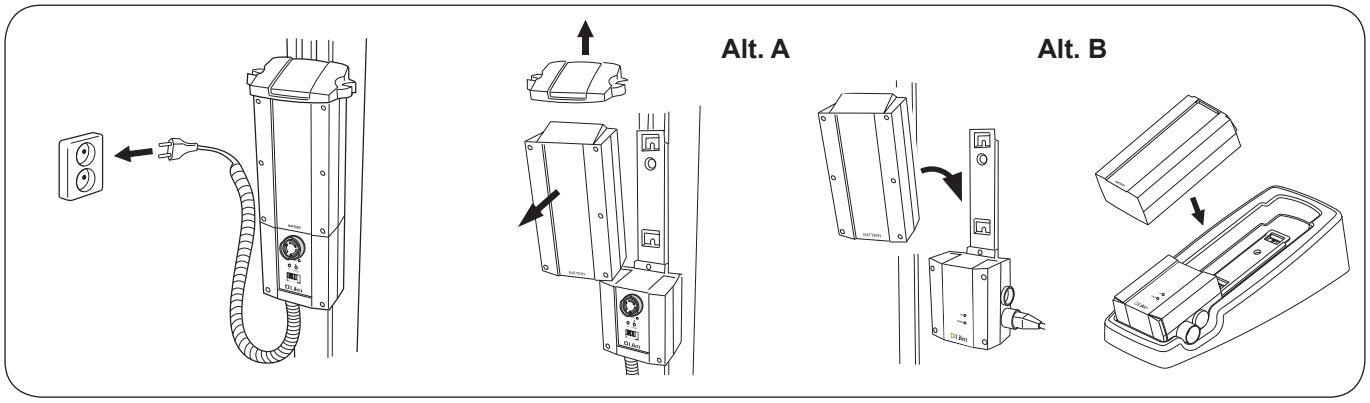
For maximum battery life, batteries must be charged regularly. We recommend charging after use or each night.

Maximum charge is reached after about 6 hours. When the batteries are fully charged, the charger disconnects automatically. **NOTE! A yellow indicator lamp on the control unit lights constantly during charging. When the batteries are fully charged, the yellow lamp shuts off. If this lamp continues to light after 8 hours, the batteries probably need to be replaced. Discontinue charging and replace batteries.**

Never charge batteries in a wet area!

If the lift is not in daily use, we recommend that the emergency stop be pressed in after the lift has been used. This breaks the current and conserves battery power. Make sure the lift is fully charged before pressing in the emergency stop.

Charging procedures



With built-in charger:

Plug the coiled cable into a wall socket (100-240 V AC). Check that the yellow lamp on the control box lights (indicates charging).

If the charger cable is stretched out it should be replaced to avoid the risk of the cable getting caught and tear.

With wallmounted charger or table charger housing:

Loosen the holder for the charger cable. Remove the battery box from the control box by loosening the locking device on top of the battery box.

Alt. A. Place the battery box on the wallmounted charger. Check that the charger is plugged into the wall socket (100-240 V AC) and that the yellow lamp on the front of the charger lights (indicates charging).

Alt. B. Place the battery box on the charger in the table charger housing. Check that the charger is plugged into the wall socket (100-240 V AC) and that the yellow lamp on the front of the charger lights (indicates charging).

Note! The lift does not operate when the charger cable is plugged into a wall socket.

Old batteries are to be left at the nearest recycling station or given to personnel authorized by Liko/Hill-Rom.

Maximum Load

Different maximum allowable loads may apply to different products on the assembled lift system: lift, slingbar, sling and other accessories. For the total lift system, the lowest max. allowable load indicated for the respective products on the system always applies. For example: A Viking L that is approved for 250 kg (550 lbs.) may be equipped with a lifting accessory that is approved for 300 kg (660 lbs.). In this case, the applicable max. load is 250 kg (550 lbs.) for the total lift system.

Study markings on the lift and lifting accessories or contact your Liko/Hill-Rom representative if you have any questions.

Recommended Accessories

Slingbars and accessories recommended for use with the Viking series of mobile lifts are described below.

Changing slingbars and adding extra accessories affects the maximum lifting height of the lift. Before changing slingbars and accessories, it is important to ensure that it will still be possible to achieve the desired lifting height for situations in which the lift will be used.

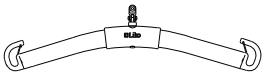
For choice of appropriate slings and other lifting accessories, see e.g., the brochure *"Lifting accessories".* For further guidance on choosing a sling, consult the instruction guide for the respective sling model. Here you will find advice on suitable combinations of Liko slingbars and Liko slings.

Contact your Liko/Hill-Rom representative or visit www.liko.com for advice and information on Liko's product range.

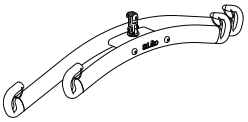
Universal Slingbar 350 Prod. No. 3156074
Max 300 kg / 660 lbs.

Universal Slingbar 450 Prod. No. 3156075
(Standard for Viking L)
Max 300 kg / 660 lbs.

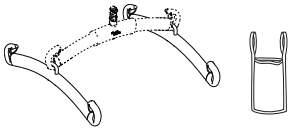
Universal Slingbar 600 Prod. No. 3156076
Max 300 kg / 660 lbs.



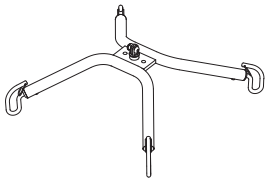
Universal Twinbar 670 Prod. No. 3156077
Max 300 kg / 660 lbs.



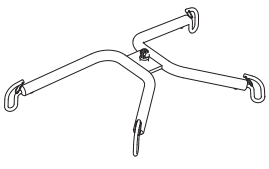
Sling Sidebars 450
incl. storage bag Prod. No. 3156079
Max 300 kg / 660 lbs.



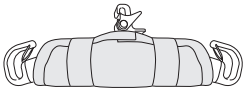
Sling Cross-bar 450 Prod. No. 3156021
Max 300 kg / 660 lbs.



Sling Cross-bar 670 Prod. No. 3156018
Max 300 kg / 660 lbs.



Slingbar Cover Paddy 30 Prod. No. 3607001
(fits Universal Slingbar 350, 450 and 600 and Slingbar Slim 350)



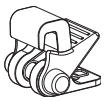
Quick-release Hook

Liko's Quick-release Hook system enables quick and easy exchange of lifting accessories on Liko's mobile and stationary lifts. Viking L requires Q-link 13 for use with Quick-release Hook.

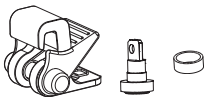
Quick-release Hook Universal fits Universal Slingbar 350, 450 and 600 (Prod. No. 3156074-3156076). Quick-release Hook TDM fits Sling Cross-bar 450 and 670 (Prod. No. 3156021 and 3156018) and Universal Twinbar 670 (Prod. No. 3156077).

When a slingbar mounted with the Quick-release Hook system is used, the lifting height will be 33 mm shorter than with a permanently mounted slingbar.

See "Guide to Liko´s Quick-release Hook System", which can be downloaded from our website, www.liko.com, or contact Liko/Hill-Rom for more information on the advantages and use of the Quick-release Hook system.



Quick-release Hook Universal
Prod. No. 3156508



Quick-release Hook TDM
Prod. No. 3156502

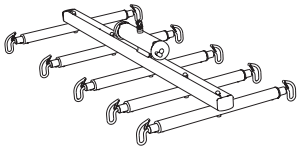
Q-link 13
Prod. No. 3156509

Horizontal stretchers

Liko FlexoStretch can be used together with Viking L for horizontal lifts. Max. load 300 kg (660 lbs.).

Several horizontal stretchers for a max. load of 200 kg (440 lbs.) are included in Liko's assortment of lifting accessories.

Contact Liko/Hill-Rom for more information.



Liko FlexoStretch
Prod. No. 3156057

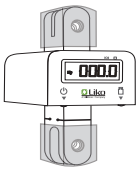
Bag for Slingbars Prod. No. 2001025

Scale

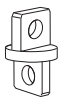
In need of weighing persons in combination with Viking L we recommend LikoScale 350 (Adapter 12 mm is required). Max. load 350 kg (770 lbs.).

LikoScale 350 is certified according to the european directive NAWI 90/384 (Non Automatic Weighing Instruments).

Contact Liko/Hill-Rom for more information.



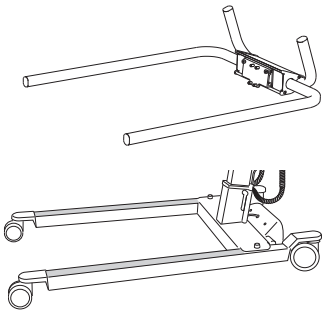
LikoScale 350
Prod. No. 3156228



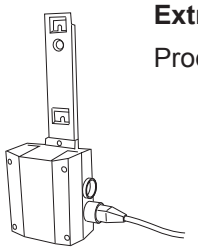
Adapter 12 mm
Prod. No. 2016504

Armrest Viking L, XL Prod. No. 2047010

Leg Protector Viking L Prod. No. 2046012



Battery charger, for wall mounting
or for use with the Table Charger Housing
Prod. No. 2004106



Extra battery
Prod. No. 2006106

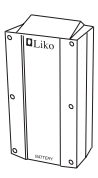
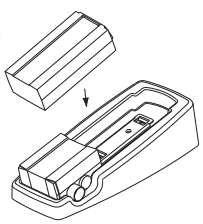


Table Charger Housing excl. charger and battery
Prod. No. 2107103



Simple Troubleshooting

The lift does not work up/down. Width adjustment does not work in/out.

1. Check that the emergency stop button is not pushed in (p. 7).
2. Check that the cables are correctly connected (p. 5).
3. Check that the charger cable is not connected to the wall socket.
4. Check that the battery is charged (p. 8).
5. Check that the contact plates of the battery are not defective or broken off.
6. *If the lift still does not work satisfactorily, contact Liko/Hill-Rom.*

Battery charging does not work.

1. Check that the emergency stop button is not pushed in (p. 7).
2. Check to ensure that the wall socket is power-supplied.
3. Check to ensure that the charger cable is correctly connected (p. 6 & 8).
4. Check that the contact plates of the battery box are not defective or broken off.
5. *If the lift still does not work satisfactorily, contact Liko/Hill-Rom.*

The lift stops in the elevated position.

1. Check that the emergency stop button is not pushed in (p. 7).
2. Use the electrical emergency lowering (marked) to safely lower the patient (p. 7).
3. Use the mechanical emergency lowering (marked) to safely lower the patient (p. 7).
4. Check that the battery is charged.
5. *If the lift still does not work satisfactorily, contact Liko/Hill-Rom.*

If you hear unusual sounds.

Contact Liko/Hill-Rom.

Care and Maintenance

Care and inspection

For safe and trouble-free operation, a few routine procedures should be performed every day the lift is used.

- Visually inspect the patient lift and check for external damage or wear
- Check that all screws and lock nuts on the slingbar are tight
- Check that the latches on the slingbar work properly
- Check the handcontrol and the lift and width movements
- Check the emergency lowering function (both electrical and mechanical)
- Charge the battery every day the lift is used, and check charger function.

When necessary, clean the lift with common surface cleaners or disinfectants and check to ensure that the wheels are free of dirt and hair. **NOTE! Do not use cleaning agents that contain phenol or chlorine, since these can damage aluminium and polyamide material.**

△ The lift should not be exposed to running water.

Service

Viking L must be inspected at least once per year. Pay particular attention to parts that are subject to wear.

△ Repairs and maintenance may only be carried out according to Liko service manual, by personnel authorized by Liko and using original Liko spare parts.

Service agreements

Liko invites you to sign a service agreement for regular maintenance and testing of your Liko product.

Transportation and storage

During transportation, or when the patient lift is not to be used for some time, the emergency stop button should be pushed in. The environment where the patient lift is transported and stored should have a temperature between 10 ˚C and 40 ˚C and a humidity between 30 % and 75 %. The air pressure should be between 700 and 1060 hPa.

Recycling

For instructions on how your Liko product should be recycled, please visit our website www.liko.com.

Product changes

Liko's products are constantly being updated and refined. Liko reserves the right to change aspects of the products without prior notice. Contact your local Liko/Hill-Rom representative for updated information and advice.

Design and Quality by Liko in Sweden

Liko is quality certified according to ISO 9001 and its equivalence for the medical device industry, ISO 13485.
Liko is also certified according to environmental standard ISO 14001.

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